

Echelon Biosciences Inc.

CL4H6

Catalog number: N-1016

Molecular Formula: C₅₉H₁₁₃NO₅

MW: 916.56

CAS: 2256087-35-9

Alternate Name: 7-(4-(dipropylamino)butyl)-7-hydroxytridecane-1,13-diyl dioleate; 9-octadecenoic acid, 1,1'-[7-[4-(dipropylamino)butyl]-7-hydroxy-1,13-tridecanediyl] ester

Solubility: Methanol, ethanol, DMF, DMSO.

Storage and Handling: CL4H6 is stable for at least 2 years when stored as an oil, protected from moisture, and light at -20°C. Solutions of CL4H6 should be stored at -20°C between uses.

Background:

Harashima group from Hokkaido University developed a hepatocyte-specific drug delivery system called multifunctional envelope-type nanodevice (MEND) which gives improved siRNA endosomal escape efficiency. The three generations of the pH-responsive ionizable lipid of the MEND system are YSK05 (2012, pKa 6.4), YSK13 (2016, pKa 6.45), and CL4H6 (2019, pKa 6.25). The ED50 of Factor VII knockdown after the intravenous injection of YSK05, YSK13 and CL4H6 LNPs into mice were shown to be 60 ug/kg, 15 ug/kg, 2.5 ug/kg respectively.

References: 1) Sato, Y., et al. "Understanding structure-activity relationships of pH-sensitive cationic lipids facilitates the rational identification of promising lipid nanoparticles for delivering siRNAs in vivo". J. Control. Release 295, 140-152 (2019). DOI: 10.1016/j.jconrel.2019.01.001 2) Shobaki, N., et al. "Manipulating the function of tumor-associated macrophages by siRNA-loaded lipid nanoparticles for cancer immunotherapy." J. Control. Release 325, 235-248 (2020). DOI: 10.1016/j.jconrel.2020.07.001

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

Technical Data Sheet, Rev 1, 04-08-24 – For research use only. Not intended for diagnostic or therapeutic use.



Echelon Biosciences Inc.

Ph: 866-588-0455

Fax: 801-588-0497

Echelon-inc.com